

REMARKS

Claim 1 has been amended to call for forming a strained channel MOS transistor with said crystalline film forming at least part of a source and drain. Claim 1 already called for blanket depositing a mobility enhancing silicon material over a region of a semiconductor structure to form amorphous and crystalline films.

In the past, the selective deposition of highly doped material to form sources and drains was difficult using existing selective deposition techniques. With the claimed invention, a blanket deposition technique may be utilized which allows the doping of the blanket deposited material to be higher.

The cited reference to Mizushima in the relied upon embodiment does not teach doping the silicon which is deposited over the gate structure. However, in another embodiment, it is pointed out that Mizushima does teach doped silicon deposition. But that doped silicon deposition is described, as pointed out by the Examiner, in paragraphs 119-126. This is in accordance with the sixth embodiment which corresponds to the first and second embodiments. Referring to the first and second embodiments, shown in Figures 1A and 1B, it can be seen that these are merely planar depositions of epitaxial material. In other words, there is no deposition over a gate electrode. The only time the deposition is done over a gate electrode it is done without doping of the silicon. This is clearly because the intent was to form sources and drains from the material that are subsequently doped. For example, in the relied upon embodiment shown in Figures 12A-12D, implantation is used for source/drain formation. See paragraph 147. Therefore, there was no reason to apply mobility enhancing silicon material in the first place.

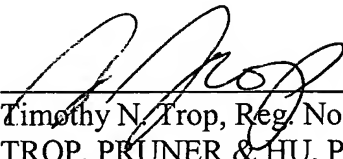
Thus, the cited reference does not teach blanket depositing a mobility enhancing silicon material and then selectively removing the amorphous film without substantially removing the silicon film to form a strained channel MOS transistor with crystalline films forming at least part of the source and drain.

In effect, Mizushima teaches away from the claimed invention because when the silicon is deposited to form the source and drain, the silicon is post-doped by ion implantation, not pre-doped (i.e., mobility enhanced), as claimed. When Mizushima teaches pre-doping of the deposited silicon, he does not use it to form source and drains and he does not deposit over a gate electrode.

Therefore, reconsideration is respectfully requested.

Respectfully submitted,

Date: November 16, 2006



Timothy N. Trop, Reg. No. 28,994
TROP, PRUNER & HU, P.C.
1616 South Voss Road, Suite 750
Houston, TX 77057-2631
713/468-8880 [Phone]
713/468-8883 [Fax]

Attorneys for Intel Corporation